

Core Stability & Real-Time Ultrasound

What is it?

The “core” refers to a corset of muscles that run around the lower half of the trunk. These muscles contract to hold the trunk firmly during all of our day-to-day tasks, work and sporting activities. They even have a role to play during breathing and in relation to continence.

Why are core muscles important?

Practically all our activities involve movements of our arms and/or legs: reaching, lifting, turning, standing up, walking, running, throwing, kicking, stepping, jumping ... Because our arms and legs are connected to the trunk, all these movements depend on the core to provide a strong, stable base. If the trunk is unstable the movements will be less efficient and co-ordinated.

The core muscles and back pain

Research suggests that the deep core muscles can stop working properly, may fail to fire at the right time and/or start to lose strength and endurance. Other muscles are then forced to take over from the core muscles, which can lead to pain, stiffness, poor balance and difficulty performing daily tasks.

Training the core muscles

Specific exercises are necessary to retrain the core muscles. These exercises can be quite difficult to perform properly in the initial stages and it is sometimes hard to tell if they are being performed correctly.

The difficulty with training the core muscles relates to the demands of performing muscles contraction which are subtle in structures which are located deep below the skin surface.

Real-Time Ultrasound (the same type that is used to image during pregnancy) is used by physiotherapists at the Castle Hill Physiotherapy & Sports Injuries Centre to train the deep core muscles. This enables your physio to see if you are doing the exercises correctly and find the best way for you to carry out your training.

Once the basics have been mastered, your physiotherapist will show you how to progress the exercises and integrate them into other activities.

The benefits

Optimum function of the core muscles brings a range of benefits: The joints and ligaments of the lower back and pelvis are supported and protected; The trunk and upper body is held stable when walking, climbing and running; balance and co-ordination is improved and; the shoulders and arms can work from a strong, stable base so that they function most efficient.

Research has demonstrated lower recurrence rates of low back pain episodes in individuals who undertake specific core muscle training utilising Real-Time Ultrasound.